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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/734,450	12/12/2003	Eric Traut	MSFT-2772 / 305423.01	9680
41505 7590 08/10/2007 WOODCOCK WASHBURN LLP (MICROSOFT CORPORATION) CIRA CENTRE, 12TH FLOOR 2929 ARCH STREET PHILADELPHIA, PA 19104-2891			EXAMINER JANAKIRAMAN, NITHYA	
			ART UNIT 2123	PAPER NUMBER
			MAIL DATE 08/10/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/734,450

Applicant(s)

TRAUT, ERIC

Examiner

Nithya Janakiraman

Art Unit

2123

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

This action is in response to the submission filed on 5/29/2007. Claims 1-40 are presented for examination.

#### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

1. Claims 1-10 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.
2. Claim 1 recites "utilizing the bimodal virtual device", however, there is no indication of how exactly the device is "utilized". The method merely consists of a single step of "utilizing" that describes a virtual device acting in complete isolation. The sole step of "utilizing" fails to produce any discernable result, for example, what the emulated device or idealized virtual device is used for. Claim 1 therefore fails to produce a useful, concrete, and tangible result, and for that reason is non-statutory. Claims 2-10 are rejected by virtue of their dependency.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. The term "utilizing" as described by the amended claim language is vague and indefinite as there appears to be no positively recited description of "utilizing". It appears that "utilizing" does not require any useful work to be performed. It is unclear how the amended claim language limits the scope of "utilizing," if at all. Claims 1 also recites "is accessible" and "is capable", with no positive recitation of what is required to occur. Claims 2-10 are rejected by virtue of their dependency.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,848,012, LeBlanc et al (hereinafter LeBlanc) in view of US Publication 2003/0061401, Luciani (hereinafter Luciani).
6. LeBlanc discloses one or more virtual driver that may be adapted to operate in *one or a plurality of modes* (column 7, lines 46-54). However, LeBlanc does not disclose the emulation of a hardware device.

7. Luciani discloses the usage of virtual input devices, such as a virtual CD-ROM, or virtual floppy drive (paragraph [0010])

8. LeBlanc and Luciani are analogous art because they are both related to the field of virtual drivers.

9. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the different virtual devices of Luciani that support multiple modes as taught by LeBlanc, because "essentially any input device or controller can be emulated or virtualized" and "with the capability to emulate or virtualize an input device, the server S need not implement that type of input device" (Luciani, paragraph [0020]).

10. Regarding claim 1, LeBlanc and Luciani teach:

A method for implementing a bimodal virtual device in a computer system, said method comprising:

utilizing the bimodal virtual device such that it selectively operates with one or more virtual machines in two different modes (LeBlanc, col. 7, lines 46-54), a first mode comprising a hardware mode during

which the bimodal virtual device emulates a specific hardware device (Luciani, paragraph 10, "remote real input device", "virtual floppy drive") and is accessible by a virtual machine via a device driver that is capable of driving the specific hardware device (Luciani, paragraph [0010], "virtual CD-ROM drive"), a second mode comprising an idealized mode where the bimodal virtual device operates with improved performance over the first mode and without emulating the specific hardware device (LeBlanc, col. 7, lines 55-67, "narrowband and wideband mode").

11. Regarding claims 2, 12, 22, and 32, LeBlanc and Luciani teach:

The method of claim 1 wherein:

the bimodal virtual device selectively operates in the hardware mode when a device driver interfacing with said bimodal virtual device has not been designed to interface with said bimodal virtual device operating in said second mode (LeBlanc, column 7, lines 46-54); and  
the bimodal virtual device selectively operates in the idealized mode when the driver interfacing with said bimodal virtual device has been designed to interface with said bimodal virtual device operating in said second mode (LeBlanc, column 7, lines 46-54).

12. Regarding claims 3, 13, 23, and 33 LeBlanc and Luciani teach:

The method of claim 2 wherein the functionality of the second mode extends the functionality of the first mode (LeBlanc, column 7, "narrow band mode and wide band mode").

13. Regarding claims 4, 14, 24, and 34, LeBlanc and Luciani teach:

The method of claim 2 wherein the functionality of the second mode is independent of the functionality of the first mode (This property is inherent in LeBlanc's multimodal device).

14. Regarding claims 5, 15, 25, and 35, LeBlanc and Luciani teach:

The method of claim 4 wherein the functionality of the second mode disables the functionality of the first mode (column 7, lines 46-54).

15. Regarding claims 6, 16, 26, and 36, LeBlanc and Luciani teach:

The method of claim 4 wherein the functionality of the second mode disables portions of the functionality of the first mode (column 7, lines 46-54).

16. Regarding claims 7, 17, 27, and 37, LeBlanc and Luciani teach:

The method of claim 2 wherein the second mode is enabled through the use of at least one bit in a virtual device register (This property is inherent in LeBlanc's multimodal device).

17. Regarding claims 8, 18, 28, and 38, LeBlanc and Luciani teach:

The method of claim 2 wherein the second mode is enabled through the use of at least one bit in a register specifically created for utilization by one or more virtual devices (This property is inherent in LeBlanc's multimodal device).

18. Regarding claims 9, 19, 29, and 39, LeBlanc and Luciani teach:

The method of claim 2 wherein the second mode is enabled through the use of a prescribed sequence of commands or data that change a value in at least one register (This property is inherent in LeBlanc's multimodal device).

19. Regarding claims 10, 20, 30, and 40, LeBlanc and Luciani teach:

The method of claim 2 wherein  
the second mode is enabled through the use of a second mode driver installed within a guest operating system environment (This property is inherent in LeBlanc's multimodal device); and

if the second mode driver is not present, a first mode driver is instead enabled (This property is inherent in LeBlanc's multimodal device).

20. Regarding claims 11, 21, and 31, LeBlanc and Luciani teach:

A computer system, said computer system comprising a bimodal virtual device that selectively operates as a hardware virtual device in a first mode and as an idealized virtual device in a second mode (LeBlanc, col. 7, lines 55-67, "narrowband and wideband mode"), wherein the first mode the bimodal virtual device emulates a real hardware device (Luciani, paragraph 10, "virtual CD-ROM drive"), and in the second mode the bimodal virtual device functions as an abstract device that is a same type of device as the real hardware device but is incompatible with software configured to interact with the real hardware device (LeBlanc, col. 7, lines 55-67, "narrowband and wideband mode").

### *Conclusion*

21. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37



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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nithya Janakiraman whose telephone number is 571-270-1003.

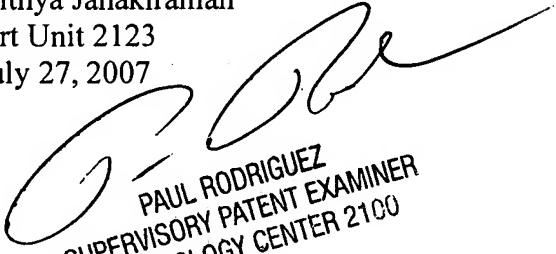
The examiner can normally be reached on Monday-Thursday, 8:00am-5:00pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodriguez can be reached on (571)272-3753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nithya Janakiraman  
Art Unit 2123  
July 27, 2007

NJ



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